UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,507	10/31/2003	Robert H. Wollenberg	T-6298D (538-63)	3586

7590 03/19/2008

Michael E. Carmen, Esq.
DILWORTH & BARRESE, LLP
333 Earle Ovington Blvd.
Uniondale, NY 11553

EXAMINER	
WALLENHORST, MAUREEN	

ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
03/19/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT H. WOLLENBERG
and THOMAS J. BALK

Appeal 2007-0510
Application 10/699,507[1]
Technology Center 1700

Decided: March 19, 2008

Before FRED E. McKELVEY, *Senior Administrative Patent Judge*, and ADRIENE LEPIANE HANLON and MICHAEL P. TIERNEY, *Administrative Patent Judges*.

HANLON, *Administrative Patent Judge*.

DECISION ON REHEARING

The Appellants request rehearing of a Decision on Appeal dated September 20, 2007. On rehearing, the Appellants argue that the Board misapprehended or overlooked the following three points. *See* 37 C.F.R. § 41.52(a)(1) (2007). The request for rehearing is GRANTED.

Discussion

[1] Application 10/699,507 was filed on October 31, 2003. The real party in interest is said to be Chevron Oronite Company LLC.

I.

The Appellants argue that the Board erred in finding that the lubricant compositions disclosed in Kolosov would have been expected to contain a major amount of a base lubricant oil and a minor amount of an additive. The Appellants argue that "a lubricating oil composition can be a concentrate that contains *a major amount of a lubricating oil additive* and *a minor amount of base oil of lubricating viscosity* as a diluent for the concentrate." The Appellants argue that this argument was overlooked on appeal. The Appellants also point to *Chemistry and Technology of Lubricants* 88 (R.M. Mortier & S.T. Orszulik, eds., 2nd ed. 1997) to support their argument. Request 3, 7.

First, *Chemistry and Technology of Lubricants* is not entitled to consideration on rehearing. 37 C.F.R. § 41.52(a)(1) (2007).[2] Second, the Appellants' argument was not overlooked on appeal. Indeed, the Board found (Decision 16:3-12; see also Decision 19:17-26):

> Kolosov does not expressly disclose that the lubricant compositions comprise a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive. However, the record before us establishes that one of ordinary skill in the art would have understood "additive" to mean any substance incorporated into a base material, usually in a low concentration. *See The Condensed Chemical Dictionary* at 20 [(10th ed. 1981)]; see also O'Rear, paras. [0002] and [0046]. We find that one of ordinary skill in the art would have reasonably expected the lubricant compositions in Kolosov, comprising a lubricant and an additive, to have a major amount of a base oil and a minor amount of an additive.

[2] The Appellants relied on *Chemistry and Technology of Lubricants* for the first time on appeal in the reply brief. A reply brief shall not include any new evidence. 37 C.F.R. § 41.41(a)(2) (2006). See Decision 13, n.2.

On rehearing, the Appellants have failed to point to any error in these findings. The mere offer of an alternative definition for "additive" does not sufficiently explain why, in the context of the Kolosov invention, the Board erred.

The Appellants also argue that a lubricating oil composition would not be expected to contain a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive "each and every time." Request 3, 7. However, the Board did not make such a finding.

II.

The Appellants argue that the teachings of Tolvanen were misapprehended with respect to claim 43. Claim 43 reads as follows:

> The system of claim 39, wherein the testing station includes a light source and a photocell aligned with the light source.

The Appellants argue that the light source and prism disclosed in Tolvanen "cannot possibly be aligned with each other (which explains why the light source 11 and indicator/photocell 14 are not 'aligned' in the Tolvanen device)." Request 4.

The Decision on Appeal states (Decision 15:11-24):

> Tolvanen discloses a device that determines the stability or storability of oil by measuring the intensity of light scattering from the oil surface. The measuring device comprises a light source 11, a sample vessel 12 containing an oil sample, and an indicator 14. In operation, a light ray 16 is directed at any angle from the light source 11 onto the surface of the oil in sample vessel 12. Part of the arriving light ray 16 is scattered as a light ray 18 from the oil surface and is detected by indicator 14 at any angle. Tolvanen, 2:52-63; Figure 1. The Examiner finds

> that indicator 14 is a photocell and is "aligned" with the light source 11. Answer at 14-15. . . .
>
> Significantly, the Appellants have failed to explain why the light source 11 and indicator/photocell 14 are not "aligned" in the Tolvanen device.

On rehearing, the Appellants have likewise failed to explain *why* the light source 11 and indicator/photocell 14 in the Tolvanen device "cannot possibly be aligned with each other." To the extent that the Appellants could be arguing that the light emitted from light source 11 is not directed toward indicator/photocell 14 in a straight line, claim 43 is not so limited.

In proceedings before the USPTO, claims in an application are given their broadest reasonable interpretation consistent with the specification. *In re Sneed*, 710 F.2d 1544, 1548 (Fed. Cir. 1983). The Appellants do not define the term "align" in the Specification. Moreover, according to the Specification, the light emitted from the light source is not necessarily "aligned" with the photocell in a straight line.[3] See Specification 21:3-6 ("In [a second] embodiment, photocell 222 is mounted so as to be *aligned* at a suitable angle, preferably 90°, to the incident light beam from light source 221. In this second embodiment, photocell 222 measures light scattered by the sample." Emphasis added.).

III.

---

[3] According to *Webster's Ninth New Collegiate Dictionary* at 70 (1984), "align" is defined as "1: to bring into line or alignment," and "alignment" is defined as "1: the act of aligning or state of being aligned; *esp*: the proper positioning or state of adjustment of parts (as of a mechanical or electronic device) in relation to each other" (copy attached). *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1324 (Fed. Cir. 2005) (a dictionary may be consulted when construing a claim term, so long as the dictionary is not used to contradict the meaning of a claim term that is unambiguous in light of the intrinsic evidence).

As a preliminary matter, the Appellants argue that the Board removed O'Rear and Tolvanen from consideration in determining whether claims 1-9, 18, and 19 as well as claims 20-29 and 38 would have been obvious over the combination of Kolosov, O'Rear, and Tolvanen.[4] Request 5, 6.

The Board did not remove O'Rear and Tolvanen from consideration in the rejection of claims 1-9, 18, and 19. Rather, referring to step (c) in claim 1, the Board stated (Decision 17:18-21):

> Claim 1 is not limited to measuring storage stability by measuring the formation of sediment. Therefore, it is not necessary to consider the teachings of O'Rear and Tolvanen in connection with the *step of measuring storage stability* [step (c)] recited in claim 1. [Emphasis added.]

Likewise, the Board did not remove O'Rear and Tolvanen from consideration in the rejection of claims 20-29 and 38. Decision 18:20-23.

As for step (b) in claims 1 and 20, the Appellants argue that the Board misapprehended the teachings of Kolosov. Specifically, the Appellants argue that Kolosov provides no suggestion or motivation for obtaining storage stability data by maintaining each sample at a predetermined temperature for a predetermined time. Request 6, 8.

The Board found that Kolosov discloses a high throughput system for measuring numerous properties of lubricant compositions, including viscosity, thermal degradation, aging characteristics, and agglomeration or

---

[4] Claims 1 and 20 read in relevant part as follows:

> A high throughput method . . . comprising:
> (a) providing a plurality of different . . . samples . . . ;
> (b) maintaining each sample at a predetermined temperature for a predetermined time;
> (c) measuring the storage stability of each sample to provide storage stability data for each sample . . . .

assemblage of molecules. The Board found that one of ordinary skill in the art would have found these properties useful in determining the storage stability of lubricant compositions. Decision 16:22-17:1; see also Decision 20:1-6. The Board also found that Kolosov contemplates measuring a parameter of a sample at a first time followed by measuring the parameter at a second time and so on during a predetermined period of time. Decision 7:7-10. On rehearing, the Appellants have not pointed to any error in these findings.

The Examiner found that O'Rear and Tolvanen teach that is it common to measure the storage stability of lubricating oil compositions by maintaining the compositions at a certain temperature for a predetermined period of time. See Ans. 7-8. The Appellants have not pointed to any error in these findings.

We find that one of ordinary skill in the art would have recognized that maintaining a composition at a predetermined temperature for a predetermined time simulates storage conditions. Accordingly, we find that one of ordinary skill in the art would have found it useful to maintain the lubricant compositions disclosed in Kolosov at a predetermined temperature for a predetermined time prior to measuring properties related to storage stability. *See KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007) (a person of ordinary skill is also a person of ordinary creativity, not an automaton).

IV.

The Decision on Appeal includes a section entitled "Other Issues." Decision 22:5-16. In that section, the Board found that the definition of

"additive" relied on by the Examiner and the teachings in O'Rear (paras. [0002] and [0046]) suggest that lubricants comprising a minor amount of an additive would have been known to one of ordinary skill in the art at the time the Appellants' application was filed. The Board indicated that in the event of further prosecution, the Examiner should consider the obviousness of a lubricating oil composition comprising a major amount of at least one base oil of lubricating viscosity and a minor amount of at least one lubricating oil additive as recited in claim 39.

On rehearing, the Appellants request that prosecution be reopened with respect to claim 39 in order to reply to "any position the Examiner may have taken with respect to Appellants' arguments in connection with appealed independent Claim 39 under 35 U.S.C. § 103(a)." Request 10.

The following new grounds of rejection are hereby entered by the Board. *See* 37 C.F.R. § 41.50(b) (2007).

New grounds of rejection

A. Claims 39-42

1. Appellants' invention

Claims 39-42 read as follows:

> 39. A system for screening lubricant performance, under program control, comprising:
>
> a) a plurality of test receptacles, each containing a different lubricating oil composition sample comprising (a) a major amount of at least one base oil of lubricating viscosity and (b) a minor amount of at least one lubricating oil additive;
>
> b) receptacle moving means for individually positioning said test receptacles in a testing station for measurement of storage stability in the respective sample;
>
> c) means for measuring the storage stability in the sample moved to the testing station to obtain storage stability data associated with said sample and for transferring said storage

stability data to a computer controller, wherein said computer controller is operatively connected to the means for individually moving the test receptacles.

40. The system of claim 39, wherein said receptacle moving means comprises a movable carriage.

41. The system of claim 39, wherein the receptacle moving means comprises a robotic assembly having a movable arm for grasping and moving a selected individual receptacle.

42. The system of claim 39, wherein the receptacle moving means comprises means for agitating the test receptacles.

The Appellants define "program control" as meaning that the equipment used to provide the plurality of lubricating oil compositions is automated and controlled by a microprocessor or other computer controlled device. Spec. 6:13-17.

The means for measuring the storage stability of a sample may be a rotating impeller that measures the viscosity of the sample. Spec. 24:20-25:5.

The means for transferring storage stability data is an electrical signal that is transmitted to a computer controller. Spec. 22:6-8.

The receptacle moving means may be a robotic arm. Spec. 22:19-20.

The means for agitating the test receptacles includes a robotic arm adapted to agitate the sample in the test receptacle. Spec. 24:4-6.

2. Rejection of claims 39-42

Claims 39-42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kolosov,[5] O'Rear,[6] and *The Condensed Chemical Dictionary*.[7]

The invention disclosed in Kolosov relates to a high throughput screening method for evaluating the rheological properties of a material. Kolosov, para. [0002]. The invention may be used to screen or test flowable materials such as lubricants. Kolosov, para. [0042]. The invention is said to have particular utility in connection with screening numerous material forms including oils. Kolosov, para. [0043].

The invention may be used to analyze the relative or comparative effects that an additive has upon a particular flowable sample material, e.g., the effect of a detergent, a flow modifier, or the like. Kolosov, para. [0043]. The invention may also be used to measure a library of samples comprising product mixtures that are varied with respect to additives. Kolosov, para. [0061].

Kolosov does not expressly disclose that the lubricant compositions contain a *minor amount* of at least one lubricating oil additive. However, O'Rear discloses that finished lubricants, such as those used for automobiles and diesel engines, consist of two general components: a lube base oil and additives. O'Rear, para. [0002]. The additives in the finished lubricants disclosed in O'Rear are said to be used in amounts that are known to those of skill in the art, preferably about 0.1 to about 40 weight percent of the final lube oil product. O'Rear, para. [0046]. In addition, "additive" by definition

[5] Patent Application Publication US 2004/0123650 A1 to Kolosov et al. published July 1, 2004.
[6] Patent Application Publication US 2003/0100453 to O'Rear published May 29, 2003.
[7] *The Condensed Chemical Dictionary* 20 (10th ed. 1981).

means any substance incorporated into a base material, usually in low concentrations, to perform a specific function, e.g., antioxidants, stabilizers, preservatives, thickeners, and viscosity-index improvers. *The Condensed Chemical Dictionary* at 20.

Based on the record before us, we find that one of ordinary skill in the art would have reasonably expected the lubricant compositions disclosed in Kolosov, comprising a lubricant and an additive, to contain a major amount of a base oil and a minor amount of an additive.

The high throughput system disclosed in Kolosov may be used to measure numerous properties, including viscosity, thermal degradation, aging characteristics, and agglomeration or assemblage of molecules. Kolosov, para. [0065]. We find that one of ordinary skill in the art would have found these properties useful in determining the storage stability of lubricant oil compositions.

Kolosov also discloses that the samples may be dispensed with any suitable dispensing apparatus, e.g., an automated micropipette or capillary dispenser. Kolosov, para. [0053]. Kolosov discloses that the samples may be physically separated from each other, such as in different regions of a substrate or in different sample containers. Kolosov, para. [0056].

Figure 1 illustrates a system 10 for measuring or determining material properties, such as viscosity, of a combinatorial library of material samples. Kolosov, para. [0067]. The system 10 includes a stimulus generator 12 that applies power to a probe 14 for applying a stimulus, e.g., a force such as torque, to one or more samples in an array or library of samples. Kolosov, [0067]; see also Kolosov, para. [0070]. The system 10 also includes a

sensor or transducer 20 for monitoring a response of the one or more samples to the stimulus. Kolosov, para. [0067].

Typically, the transducer 20, the stimulus generator 12, or both are in communication with a computer sub-system 23, such as a microprocessor or other like computer for manipulating data. For example, the computer sub-system 23 may be employed to receive and store data such as responses of samples, material properties of samples, or the like. Kolosov, para. [0068].

Kolosov contemplates that the substrate and sample containers can be used with automated sampling and automated substrate-handling devices. Kolosov, para. [0059]. In one embodiment, the samples may be moved relative to the probe 14 using an automated system, e.g., a robot arm. Kolosov, para. [0073]. A suitable automated system may be a robotic system that has multiple axis range of motion in the orthogonal x, y, z coordinate axes system. Typically, such an automated system would be part of or in communication with the computer sub-system 23. Kolosov, para. [0074].

As to claim 41, we find that one of ordinary skill in the art would have understood that moving samples relative to the probe 14 encompasses moving individual samples via the robot arm disclosed in Kolosov.

As to claim 40, we find that one of ordinary skill in the art would have understood that moving samples relative the probe 14 also encompasses moving the substrate that contains the individual samples. We find that one of ordinary skill in the art would have recognized that a movable carriage would be useful to move the substrate relative to the probe 14. See Kolosov, Fig. 3.

As to claim 42, Kolosov discloses that the probe 14 may be translated, rotated, reciprocated, and/or oscillated to subject the sample 16 to a variety of forces. Kolosov, para. [0070]. We find that it would have been obvious to one of ordinary skill in the art to reverse the operation of the moving parts, i.e., reciprocate, oscillate, or otherwise agitate the samples relative to the probe 14. *See In re Gazda*, 219 F.2d 449, 452 (CCPA 1955) (reversing the operation of the relatively moving parts would not amount to invention). We find that one of ordinary skill in the art would have recognized that the robot arm disclosed in Kolosov would be useful for agitating the samples. *See KSR*, 127 S. Ct. at 1742 (a person of ordinary skill is also a person of ordinary creativity, not an automaton).

B. Claim 43

1. Appellants' invention

Claim 43 reads as follows:

> The system of claim 39, wherein the testing station includes a light source and a photocell aligned with the light source.

According to one embodiment of the Appellants' invention, a light source is disposed on one side of a frame and a photocell is disposed on the opposite side of the frame. The photocell is *aligned* with the light source such that a light beam emitted by the light source can be detected and measured by the photocell. Specification 20:21-21:2. In another embodiment of the invention, the photocell is mounted so as to be *aligned* at a suitable angle, preferably 90°, to the incident light beam from the light source. In this embodiment, the photocell measures light scattered by the sample. Specification 21:3-6. The Appellants do not otherwise define the term "align" in the Specification.

Interpreting the term "align" in light of the specification, we conclude that claim 43 does not require the light source to be "aligned" with the photocell in a straight line. *Sneed*, 710 F.2d at 1548 (Fed. Cir. 1983) (claims in an application are given their broadest reasonable interpretation consistent with the specification).

2. Rejection of claim 43

Claim 43 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kolosov, O'Rear, *The Condensed Chemical Dictionary*, and Tolvanen.[8]

Kolosov does not disclose that the testing station for measuring storage stability includes a light source and a photocell aligned with the light source. O'Rear and *The Condensed Chemical Dictionary* do not cure this deficiency in Kolosov.

Tolvanen discloses a device that determines the stability or storability of oil by measuring the intensity of light scattering from the oil surface. The measuring device comprises a light source 11, a sample vessel 12 containing an oil sample, and an indicator 14. In operation, a light ray 16 is directed at any angle from the light source 11 onto the surface of the oil in sample vessel 12. Part of the arriving light ray 16 is scattered as a light ray 18 from the oil surface and is detected by indicator 14 at any angle. Tolvanen 2:52-63, Figure 1. We find that indicator 14 is a photocell and is "aligned" with light source 11 as recited in claim 43.

We find that one of ordinary skill in the art would have found the high throughput system disclosed in Kolosov to be useful for measuring the storage stability of lubricant oil compositions. The device disclosed in

[8] Patent 5,715,046 to Tolvanen granted February 3, 1998.

Tolvanen is also useful for measuring the storage stability of oil samples. We find that one of ordinary skill in the art would have found the device disclosed in Tolvanen to be another useful alternative for measuring the storage stability of the lubricant oil compositions disclosed in Kolosov.

C. Claims 44-45

1. Appellants' invention

Claims 44 and 45 read as follows:

> 44. The system of claim 39, wherein each test receptacle has a bar code affixed to an outer surface thereof.
>
> 45. The system of claim 44, further comprising a bar code reader.

2. Rejection of claims 44 and 45

Claims 44 and 45 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kolosov, O'Rear, *The Condensed Chemical Dictionary*, and Garr.[9]

Kolosov does not disclose that each sample container has a bar code affixed thereto and a system further comprising a bar code reader. O'Rear and *The Condensed Chemical Dictionary* do not cure this deficiency in Kolosov.

Garr discloses a method for producing a large chemical library of products. Garr 1:7-15. Garr discloses that reaction tubes, each containing a reaction product, are arranged in an array. Each reaction tube and product is identified by a unique code, such as a bar code, which is optically readable. Garr 4:3-9.

[9] Patent 5,993,662 to Garr granted November 30, 1999.

We find that one of ordinary skill in the art would have recognized that a bar code is a convenient way to identify and correlate information with an object. We find that Garr establishes that it was known to identify samples in a combinatorial library using optically readable bar codes. We find that one of ordinary skill in the art would have found it convenient to label each sample container in the combinatorial library of Kolosov with a bar code and provide the system of Kolosov with a bar code reader to identify and correlate information with each sample.

Order

Upon consideration of the Appellants' request for rehearing, it is

ORDERED that this opinion is denominated a new Decision on Appeal, and it is

FURTHER ORDERED that the opinion in support of this Decision on Appeal incorporates the Decision on Appeal dated September 20, 2007, in its entirety, and it is

FURTHER ORDERED that a second request for rehearing is permitted under 37 C.F.R. § 41.52(a)(1) (2007), and it is

FURTHER ORDERED that no time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2007).

REHEARING GRANTED

MAT

Michael E. Carmen, Esq.
DILWORTH & BARRESE, LLP
333 Earle Ovington Blvd.
Uniondale NY 11553